UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,848	11/26/2003	Chandra Warrier	99-814-A	9686

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _26 November 2003_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _16-32_ is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _16-32_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _26 November 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All b)☐ Some * c)☐ None of:

  1.☐ Certified copies of the priority documents have been received.

  2.☐ Certified copies of the priority documents have been received in Application No. _____.

  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to the claims filed on 11/26/2003.

2.   Claims 16-32 are pending.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for.patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claim 30 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by

Hiller et al. (US Patent 6445922 B1).

In regards to claim 24, Hiller illustrates in figure 5, a process of transmitting a

data packet from a home agent to a mobile node (a processing device). The actions

performed by the foreign agent when it receives the packet anticipate machine

executable instructions stored in a storage device that process the data packet.

Specifically, the foreign agent uses the mobile node's home IP address and the

Home agent's IP address to access a visitor list table and find a network address

identifier (NAI)(using a combination of an assigned home IP address of a given mobile

node and a home agent IP address to determine a unique communication link address

corresponding with the given mobile node).

In regards to claim 31, the foreign agent queries a visitor list table (table 20 in figure 2) to find the NAI associated with the home address and home agent. Furthermore, the NAI is a unique mobile node identifier that can distinguish mobile nodes that have identical home addresses (see column 2, lines 30-42).

In regards to claim 30, Hiller illustrates in figure 5, a process of transmitting a data packet from a home agent to a mobile node. The actions performed by the foreign agent when it receives the packet anticipate machine executable instructions that process the data packet.

Specifically, the foreign agent uses the mobile node's home IP address and the Home agent's IP address to access a visitor list table and find a network address identifier (NAI)(associating the home IP address and a home agent IP address to determine a unique communication link address corresponding with the given mobile node). Subsequently, the packet is routed towards to mobile node.

In regards to claim 31, the foreign agent queries a visitor list table (table 20 in figure 2) to find the NAI associated with the home address and home agent. Furthermore, the NAI is a unique mobile node identifier that can distinguish mobile nodes that have identical home addresses (see column 2, lines 30-42).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 16-25 and 27-29 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hiller et al. (US Patent 6445922 B1) in view of Leung (US Patent

6501746 B1).

In regards to claim 16, Hiller illustrates in figure 5, a process of transmitting a

data packet from a home agent to a mobile node. Specifically, the foreign agent uses

the mobile node's home IP address and the Home agent's IP address to access a

visitor list table and find a network address identifier (NAI)(using a combination of the

assigned home IP address of a given mobile node and a home agent IP address to

determine a unique communication link address corresponding with the given mobile

node).   Furthermore, the NAI is a unique mobile node identifier that can distinguish

mobile nodes that have identical home addresses (see column 2, lines 30-42) (having

overlapping IP addresses).

In further regards to claim 16, Hiller fails to teach, address pools for IP

addresses, where each pool is associated with a unique Home Agent IP address and

assigning a home IP address to a given mobile node from one of the multiple pools. In

figure 6, Leung teaches the above-mentioned limitation. At step 608, if a mobile node

doesn't have an IP address in the mobility-binding table of the Home agent, an IP

address is obtained form an address pool associated with the mobile node's home

network.

Therefore, it would have been obvious to one skilled in the art at the time the

invention was made to incorporate the IP address assignment method taught by Leung

with the process taught by Hiller to match the IP address and the home agent IP

address to find the unique link that terminates at a mobile node. The motivation to

combine would have been to use a unique mobile node identifier in addition to the

assigned IP address to uniquely identify a roaming mobile node.

In regards to claim 17, the relevant process from figure 5 of Hiller is carried out in

a foreign agent.

In regards to claims 18, 19 and 20, Hiller in combination with Leung teaches all

the limitations of parent claim 16. However, Hiller fails to teach, assigning the home IP

address to the given mobile node from among one of the multiple pools stored in the

mobility agent. Leung teaches the above-mentioned limitations. In figure 6, Leung

teaches the above-mentioned limitation. At step 608, if a mobile node doesn't have an

IP address in the mobility-binding table of the Home agent, an IP address is obtained

form an address pool associated with the mobile node's home network.

Therefore, it would have been obvious to one skilled in the art at the time the

invention was made to incorporate the IP address assignment method taught by Leung

with the process taught by Hiller to match the IP address and the home agent IP

address to find the unique link that terminates at a mobile node. The motivation to

combine would have been to use a unique mobile node identifier in addition to the

assigned IP address to uniquely identify a roaming mobile node.

In regards to claim 21, Hiller illustrates in figure 5, a process of transmitting a

data packet from a home agent to a mobile node. Specifically, the foreign agent uses

the mobile node's home IP address and the Home agent's IP address to access a

visitor list table and find a network address identifier (NAI)(a mobility agent using a combination of the assigned home IP address of a given mobile node and a home agent IP address to determine a unique communication link address corresponding with the given mobile node). Furthermore, the NAI is a unique mobile node identifier that can distinguish mobile nodes that have identical home addresses (see column 2, lines 30-42) (having overlapping IP addresses).

In further regards to claim 16, Hiller fails to teach, address pools for IP addresses, where each pool is associated with a unique Home Agent IP address and assigning a home IP address to a given mobile node from one of the multiple pools. In figure 6, Leung teaches the above-mentioned limitation. At step 608, if a mobile node doesn't have an IP address in the mobility-binding table of the Home agent, an IP address is obtained form an address pool associated with the mobile node's home network.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the IP address assignment method taught by Leung with the process taught by Hiller to match the IP address and the home agent IP address to find the unique link that terminates at a mobile node. The motivation to combine would have been to use a unique mobile node identifier in addition to the assigned IP address to uniquely identify a roaming mobile node.

In regards to claim 22, the relevant process from figure 5 of Hiller is carried out in a foreign agent.

In regards to claim 23, Hiller in combination with Leung teaches all the limitations of parent claim 21. However, Hiller fails to teach, assigning the home IP address to the given mobile node from among one of the multiple pools stored in the mobility agent. Leung teaches the above-mentioned limitations. In figure 6, Leung teaches the above-mentioned limitation. At step 608, if a mobile node doesn't have an IP address in the mobility-binding table of the Home agent, an IP address is obtained form an address pool associated with the mobile node's home network.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the IP address assignment method taught by Leung with the process taught by Hiller to match the IP address and the home agent IP address to find the unique link that terminates at a mobile node. The motivation to combine would have been to use a unique mobile node identifier in addition to the assigned IP address to uniquely identify a roaming mobile node.

5.   In regards to claim 24, Hiller illustrates in figure 5, a process of transmitting a data packet from a home agent to a mobile node (a processing device). The actions performed by the foreign agent when it receives the packet anticipate machine executable instructions stored in a storage device that process the data packet.

Specifically, the foreign agent uses the mobile node's home IP address and the Home agent's IP address to access a visitor list table and find a network address identifier (NAI)(using a combination of an assigned home IP address of a given mobile node and a home agent IP address to determine a unique communication link address corresponding with the given mobile node).

In further regards to claims 24 and 28, Hiller fails to teach, address pools for IP addresses, where each pool is associated with a unique Home Agent IP address and assigning a home IP address to a given mobile node from one of the multiple pools. In figure 6, Leung teaches the above-mentioned limitation. At step 608, if a mobile node doesn't have an IP address in the mobility-binding table of the Home agent, an IP address is obtained form an address pool associated (inclusive in a mobile node) with the mobile node's home network.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the IP address assignment method taught by Leung with the process taught by Hiller to match the IP address and the home agent IP address to find the unique link that terminates at a mobile node. The motivation to combine would have been to use a unique mobile node identifier in addition to the assigned IP address to uniquely identify a roaming mobile node.

In regards to claim 25, the relevant process from figure 5 of Hiller is carried out in a foreign agent.

In regards to claim 27, Hiller in combination with Leung teaches all the limitations of parent claim 24. However, Hiller fails to specifically teach, assigning the assigned home IP address to the given mobile. In figure 6, Leung teaches the above-mentioned limitation. At step 608, if a mobile node doesn't have an IP address in the mobility-binding table of the Home agent, an IP address is obtained form an address pool associated with the mobile node's home network.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the IP address assignment method taught by Leung with the process taught by Hiller to match the IP address and the home agent IP address to find the unique link that terminates at a mobile node. The motivation to combine would have been to use a unique mobile node identifier in addition to the assigned IP address to uniquely identify a roaming mobile node.

In regards to claim 29, Hiller discloses that when receiving a packet from a foreign agent, the IWF (inter working function) adds a PPP header (see column 1, lines 38-42).

6.   Claims 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiller et al. (US Patent 6445922 B1) and Leung (US Patent 6501746 B1) as applied to parent claim 24 above, further in view of Malkin et al. (US Patent 6061650).

In regards to claim 26, Hiller in combination with Leung teaches all the limitations of parent claim 24 as stated above. Neither Hiller nor Leung teach, the mobility agent being a remote access server (RAS). Malkin teaches the above-mentioned limitation in figure 1.

Remote node 10 (mobile node) has roamed into the service area of a foreign network 14 and the remote node dials into RAS 12 to establish connection (see figure 1 and column 2, lines 26-30).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the RAS as taught by Malkin into the mobile node identification process taught by Hiller and the IP address assignment method taught by

Leung, where the RAS would act as the mobility/foreign agent. The motivation to combine would be to allow a mobile node a point of attachment to a service provider when a mobile node roams into a foreign network.

7.   Claims 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiller et al. (US Patent 6445922 B1) as applied to parent claim 30, further in view of Malkin et al. (US Patent 6061650).

In regards to claim 32, Hiller teaches all the limitations of parent claim 30 as stated above. Hiller fails to teach, the mobility agent being a remote access server for establishing communication links with one or more mobile nodes. Malkin teaches the above-mentioned limitation in figure 1.

Remote node 10 (mobile node) has roamed into the service area of a foreign network 14 and the remote node dials into RAS 12 to establish connection (see figure 1 and column 2, lines 26-30).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the RAS as taught by Malkin into the mobile node identification process taught by Hiller and the IP address assignment method taught by Leung, where the RAS would act as the mobility/foreign agent. The motivation to combine would be to allow a mobile node a point of attachment to a service provider when a mobile node roams into a foreign network.

Response to Arguments

8.   Applicant's arguments with respect to claim 16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay P. Patel whose telephone number is (571) 272-3086. The examiner can normally be reached on M-F 9:00 am - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ِjpp s/18/07
Jay P. Patel
Examiner
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